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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/779,743

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Tetsuya Kawamura

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EXAMINER

QI, ZHI QIANG

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/779,743	Applicant(s) KAWAMURA ET AL.	
	Examiner Mike Qi	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-12 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 13-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/534,520.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 9-11 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5, 847,781 (Ono et al).

Claims 1, 9-10 and 18-20, Ono discloses (col.3, line 33 – col.5, line 57; Figs.2-7) that a liquid crystal display device comprising:

- substrate (SUB1);
- pixel (ITO1) portion as display area, and around the display area is peripheral area formed on the substrate (SUB1);
- signal line (such as gate line GL or data line DL) being extended from the display area to the peripheral area on the substrate (see col.7, lines 36-67; Figs.4 and 6) wherein the **end** of the gate line GL to gate terminal GTM being connected to an external drive circuit on the TFT substrate; and the **end** of the data line DL to a drain terminal DTM being connected to an external drive circuit on the TFT substrate; so that is a signal line is extended from the display area to the peripheral area on the substrate;
- signal line (such as gate line **GL**; see Fig.3) at the peripheral area (around the pixel region ITO1 'display area' is peripheral area) is covered (or under, or is

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overlapped) with a gate insulating film (GI) (first insulating film), a semiconductor layer (AS) and a protective insulating film (PSV1) (second insulating film) in this order; and that films (GI, AS, PSV1) cover or are provided over (or are formed on or covers) the signal line (such as gate line GL) at the peripheral area (around the pixel region ITO1 'display area' is peripheral area).

Claims 2 and 11, Ono discloses (Fig.3) that the gate insulating film (GI) (first insulating film), the semiconductor layer (AS), and the protective insulating film (PSV1) (second insulating film) are formed so as to extend into the pixel portion (display area).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 7-8, 12 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono as applied to claim 1-2, 9-11 and 18-20 above, and further in view of US 5,798,744 (Tanaka et al).

Claims 3 and 12, lacking limitation is such that one end of the signal line which extends at the peripheral area is connected to an output terminal of the drive IC.

However, Tanaka discloses (col.10, lines 34-40; Fig.7) that the driver IC (21) mounted on the peripheral area, and the output terminal of the driver (21) is connected

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to the terminal (351) of the image signal line, that is one end of the signal line is connected to an output terminal of the driver IC. Tanaka indicates (col.1, lines 59-64) that the vibration resistance and anti-shock properties are improved by such connection.

Therefore, it would have been obvious to those skilled in the art at the time the invention was made to connect the end of the signal to the output terminal of the drive IC as claimed in claims 3 and 12 for improving the vibration resistance and anti-shock properties.

Claims 7-8 and 16-17, Ono discloses (Fig.1) that the display area (pixel portion) comprises a plurality of pixel areas (a plurality of pixel portions ITO1); and each of the plurality of pixel areas (ITO1) is formed by an area surrounding a plurality of signal lines (DL) and a plurality of scanning lines (GL).

Allowable Subject Matter

5. Claims 4-6 and 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record neither discloses nor teaches a liquid crystal display device comprising various elements as claimed, more specifically, as the following:

the first insulating film, the semiconductor layer, and the second insulating film are formed so as to extend into a portion below the driver IC (overlapped by the driver IC), and to extend into a position halfway into the output terminal [claims 4-6 and 13-15 as shown in Figs 5-6].

The closest reference US 5,847,781 and US 5,798,744 disclose that the signal line extended to the peripheral area and connected to the output terminal of the driver IC, but they do not teach the first insulating film, the semiconductor layer, and the second insulating film are formed below the driver IC (or overlap the driver IC), and extended into a halfway of the driver IC.

Response to Arguments

6. Applicant's arguments filed on Dec.8, 2004 have been fully considered but they are not persuasive.

Applicant's arguments are as follows:

1) The references fail to disclose that a first insulating film, a semiconductor layer and a second insulating film cover or are provided over a signal line at the peripheral area.

Examiner's responses to Applicant's arguments are as follows:

1) The reference Ono clearly discloses (Fig.3) that a gate line (**GL**) (that is a signal line) at the peripheral area (around the pixel region ITO1 'display area' is peripheral area) is covered (or under or is overlapped) with a gate insulating film (**GI**) (first insulating film), a semiconductor layer (**AS**) and a protective insulating film (**PSV1**) (second insulating film) in this order; and that films (**GI, AS, PSV1**) cover or are provided over (or are formed on or covers) the signal line (such as gate line **GL**) at the peripheral area (around the pixel region ITO1 'display area' is peripheral area).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

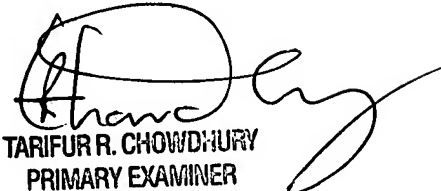
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Qi whose telephone number is (571) 272-2299. The examiner can normally be reached on M-T 8:00 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Qi
January 28, 2005



TARIFUR R. CHOWDHURY
PRIMARY EXAMINER